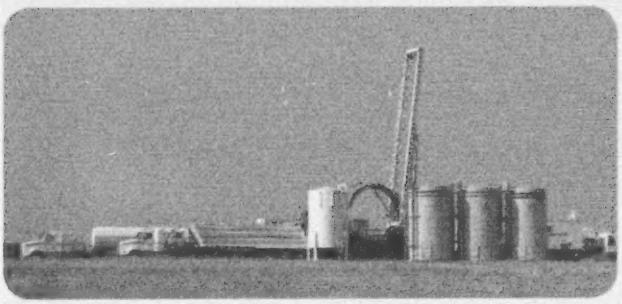
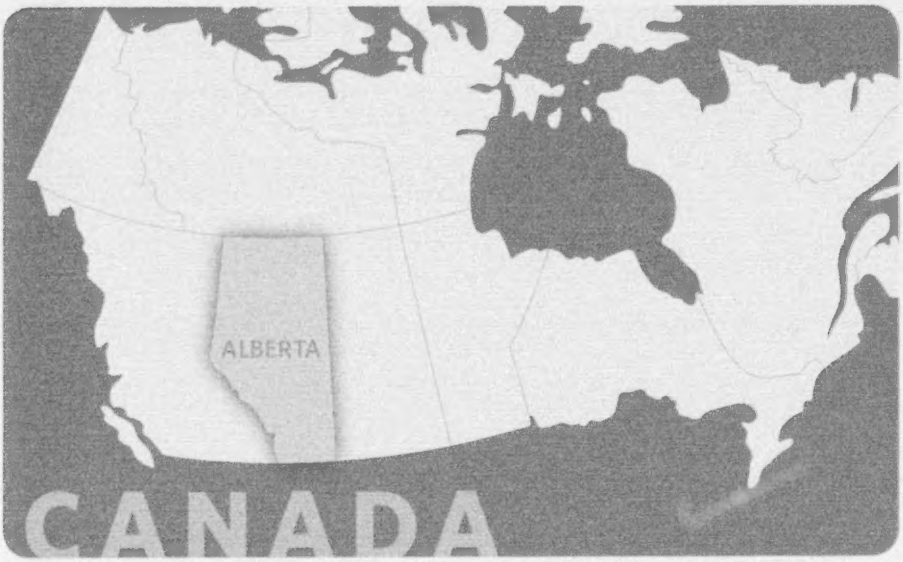


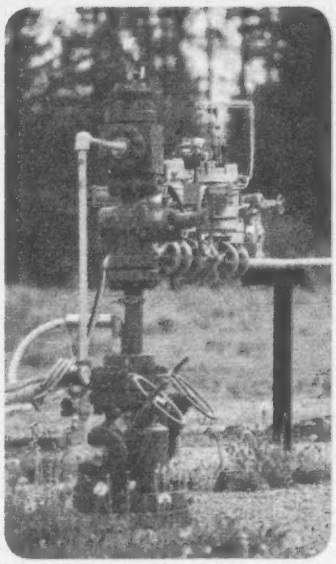
ALBERTA OIL & GAS INDUSTRY

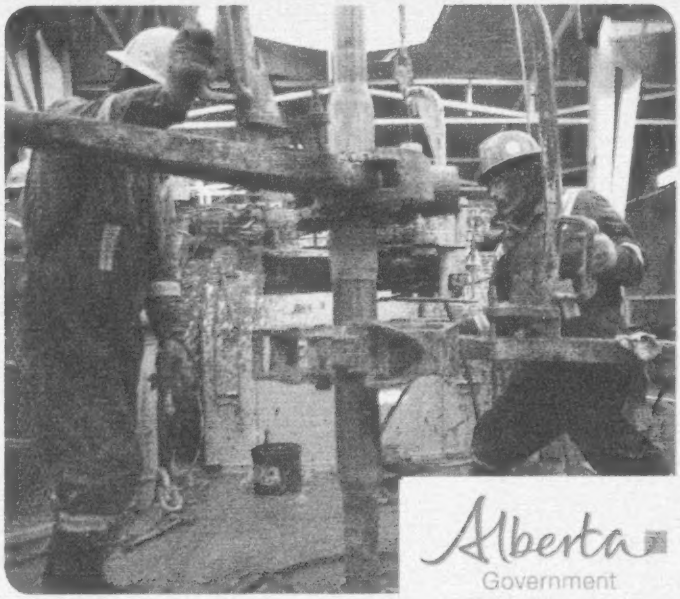
QUARTERLY UPDATE

SPRING 2014

Reporting on the period: Dec. 21, 2013 to March 17, 2014







Alberta Government

All about oil and gas*

Technological advancement has set the stage for another boom in Alberta's non-oil sands oil and natural gas industry. Until the last few years, the sun had slowly been setting on Alberta's conventional oil and natural gas industry. Oil production had declined from a peak of 1.43 million barrels per day in 1973 to a low of around 460,000 barrels per day in 2010.

But things are changing for the better, as increased implementation of long horizontal wells and multistage fracturing in tight oil plays across the province—not to mention new provincial royalty incentives to encourage drilling—has crude oil drilling activity and production on the upswing. Although natural gas activity has slowed due to weak prices, Alberta is poised to benefit once a price correction occurs.

In fact, the tight oil revolution that began in the United States and gradually moved north into Alberta marks the dawning of a new day for oil and natural gas exploration and production in the province.

In Alberta, the new technology is being used in an increasing number of oil plays. Among the most advanced plays are the Cardium in west-central Alberta, the Beaverhill Lake Carbonates near Swan Hills, the Viking in east-central Alberta and at Red Water north of Edmonton, in the Pemiscot at Princess in southern Alberta and at Judy Creek in northwestern Alberta.

Additionally, emerging liquids-rich plays like the Montney and Duvernay shale show great promise. In fact, the Duvernay play may have the most potential going forward.

At the end of 2013, industry giants such as Chevron Canada Limited and Encana Corporation reported strong liquids yields, particularly for valuable condensate, and producers are preparing to ramp up activity this year.

The Duvernay is often compared to the prolific Eagle Ford of Texas because they are both shale plays that offer a full spectrum, from dry gas through liquids-rich gas to oil. Many other shale plays, such as the Horn River Basin in British Columbia and the Marcellus or Barnett south of the border, are much more gas focused.

In terms of the potential size of the play area, the richness of the source rock and even some of the early production results, the Duvernay "is well on its way to being as big or bigger than the Eagle Ford," Canadian Discovery Ltd. has proclaimed.

The increase in horizontal drilling activity is expected to offset the steep decline in Alberta conventional production that would otherwise be expected.

In 2012, a total of 2,854 successful oil wells were drilled in Alberta, a decrease of 10.2 per cent from 2011. The number of new wells placed on production for 2012 was 3,107. From this total, 2,379 new horizontal oil wells (including those using multistage fracturing technology) were brought on production in 2012, an increase of 31 per cent from the 2011 level of 1,818 horizontal wells. This raised the total number of horizontal wells to 9,664.

The number of horizontal gas wells drilled and connected in the province is increasing as a percentage of the total. In 2012, about 53 per cent of new gas connections were horizontal wells compared with 25 per cent in 2011 based on the revised well-connection counts.

The number of new conventional gas connections is expected to gradually increase from about 1,100 in 2013 to 1,425 by 2022. The forecast number of connections is significantly lower than the prior forecast of 3,800, largely due to the shift from vertical and directional wells to more capital-intensive, but highly productive, horizontal wells.

Although low natural gas prices have reduced drilling activity in Alberta for that commodity the past few years, when prices rebound, the province will be well positioned to capitalize.

Canada is the third-largest natural gas producer in the world, with about 80 per cent of the country's gas being produced in Alberta. According to provincial figures, at the end of 2012, remaining established reserves of conventional natural gas stood at 33 trillion cubic feet, while remaining established coalbed methane gas reserves stood at 2.4 trillion cubic feet. The province estimates the remaining ultimate potential of marketable conventional natural gas at 74 trillion cubic feet.

Although conventional natural gas remains a very important part of Alberta's natural gas supply, horizontal drilling and multistage fracturing now allow for development of natural gas from a new source—unconventional natural gas resources.

Aside from coalbed methane, Alberta's unconventional natural gas resources include tight gas (natural gas trapped in low-permeability sedimentary rocks, such as sandstone or limestone) and shale gas (trapped in shale rock). ■

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*This publication contains information about Alberta's oil and gas industry, excluding oil sands. For information on the oil sands, please refer to the Alberta Oil Sands Industry Quarterly Update on this website.

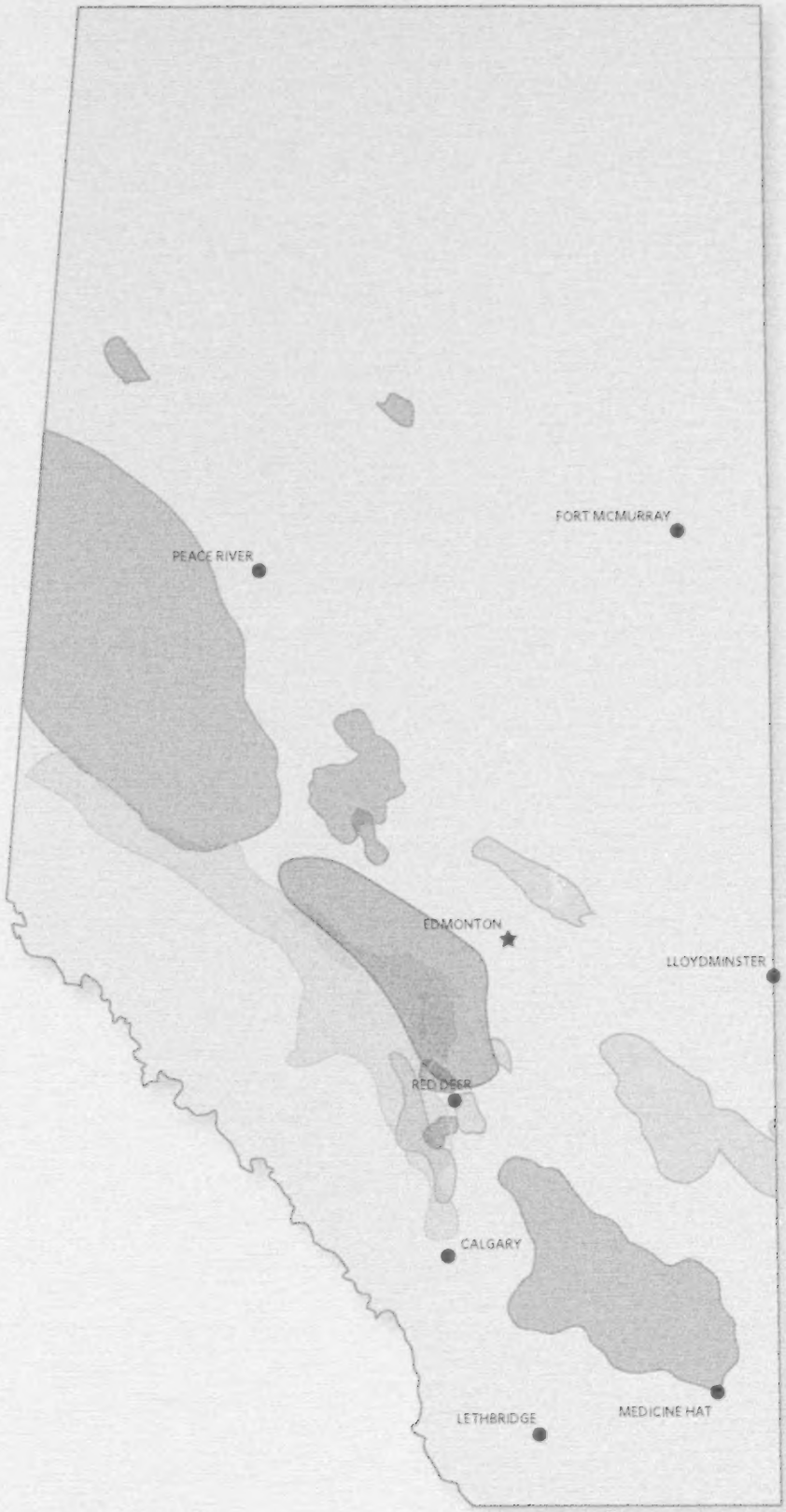
Oil plays

The Alberta Energy Regulator (AER) estimates the remaining established reserves of conventional crude oil in Alberta to be 1.7 billion barrels, representing about one-third of Canada's remaining conventional reserves.

This is a year-over-year increase of 9.5 per cent, resulting from production, reserves adjustments and additions from drilling that occurred during 2011.

In 1994, based on the geological prospects at that time, the AER estimated the ultimate potential of conventional crude oil to be 19.7 billion barrels. Given recent reserve growth in low permeability, or tight oil plays, the AER believes that this estimate may be low.

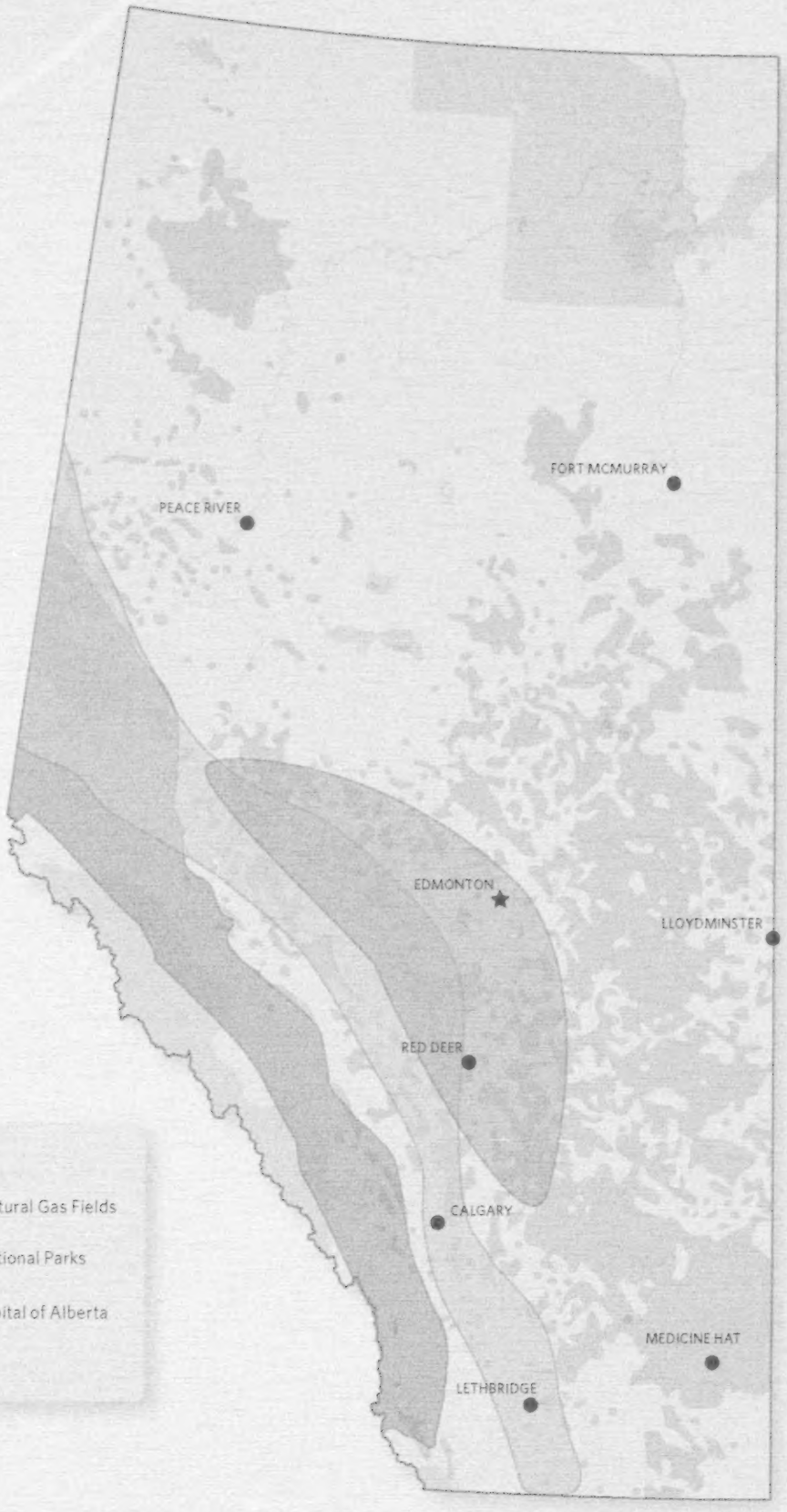
Starting in 2010, total crude oil production in Alberta reversed the downward trend that was the norm since the early 1970s. In 2010 and 2011, light-medium crude oil production began to increase as a result of increased, mainly horizontal, drilling activity with the introduction of multistage hydraulic fracturing technology.



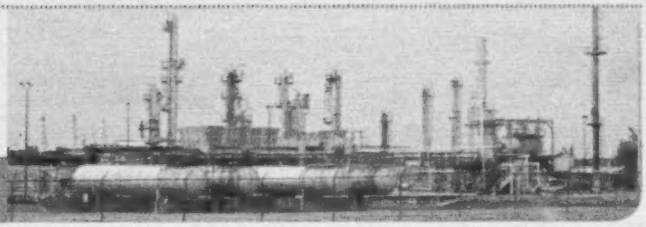
Natural gas plays

Alberta's natural gas bounty is plentiful and is produced from both conventional and unconventional reserves. While the vast majority of the province's natural gas is still produced from conventional sources, growing natural gas volumes from coal, shale and tight formations will also be strong contributors going forward.

Alberta has a large natural gas resource base, with remaining established reserves of about 33 trillion cubic feet and estimated potential of up to 500 trillion cubic feet of natural gas from the coalbed methane resource. In addition, a large-scale resource assessment of shale gas potential in Alberta is underway and could significantly add to the natural gas prospects for the province.



GOVERNMENT UPDATE



BALANCED BUDGET FOCUSES ON ALBERTANS' PRIORITIES

Budget 2014 delivers a fully balanced budget focused on core areas that support families and communities—health, education and supports for the vulnerable—while continuing to build Alberta.

With $1 billion in new operating funding for health, kindergarten to grade 12 (K-12), post-secondary education and human services to ease growth pressures, Budget 2014 implements the next phase of the Building Alberta Plan to invest in families and communities, live within our means, and open new markets for Alberta's resources for a stronger and more prosperous future.

While delivering an operational surplus of $2.6 billion, Budget 2014 continues the government's commitment to fiscal responsibility by keeping operating expense growth below population plus inflation for a second year in a row. There are also no new taxes or tax increases.

Budget 2014 also implements a renewed purpose for Alberta's savings. Two new endowments within the Alberta Heritage Savings Trust Fund will encourage social and agricultural innovation. A new Alberta Future Fund will provide flexible funding for future strategic opportunities, offering long-term benefits to Albertans and the Alberta economy, and the Alberta Heritage Scholarship Fund will be enhanced to support students exploring opportunities in the trades.

As the next phase of the Building Alberta Plan, Budget 2014 will invest $6.6 billion this year and $19.2 billion over the next three years in essential infrastructure needed to support Alberta's exceptionally strong population growth. Alberta is expected to remain Canada's fastest-growing province in 2014 and 2015, growing by about 100,000 people each year.

Budget 2014 commits funding for 155 K-12 school projects, seven post-secondary projects, 24 health facility projects, 258 kilometres of new or twinned highways and 2,500 kilometres of rehabilitated highways over the next three years.

ALBERTA GIVES BUSINESSES FASTER ACCESS TO ECONOMIC INFORMATION

Alberta Premier Alison Redford's government is giving the province's businesses a new online tool to help them compete and succeed in the province's growing economy.

The Economic Dashboard provides 26 economic metrics specific to the Alberta economy and will be updated on a near-daily basis.

Metrics include indicators such as gross domestic product, natural resources prices and employment. The metrics also include historical time series charts that visually show performance over many years.

This user-friendly, online tool translates to mobile devices and allows for easy, on-the-go access to valuable business information. The dashboard's data is available on the Alberta Open Data Portal.

The dashboard is an example of the Alberta government's commitment to provide investors, businesses and Albertans with the best economic data in the most accessible format.

The dashboard replaces the long-standing Monthly Economic Review that documented available economic statistics in monthly hard copy and electronic formats.

NEB APPROVES LINE 9B PROJECT WITH CONDITIONS

The National Energy Board (NEB) released in March the reasons for decision on the Line 9B Reversal and Line 9 Capacity Expansion Project application submitted by Enbridge Pipelines Inc. The board has approved the project, with conditions, but denied Enbridge's request for exemption from leave to open requirements.

The NEB's decision enables Enbridge to react to market forces and provide benefits to Canadians, while at the same time implementing the project in a safe and environmentally sensitive manner.

In its application, Enbridge requested approval from the board to reverse the direction of flow on a 639-kilometre segment of pipeline located between North Westover, Ont., and Montreal, as well as approval to increase the overall capacity of the Line 9 pipeline from Sarnia, Ont., to Montreal from 240,000 barrels per day to 300,000 barrels per day. Enbridge also requested a revision to its Line 9 rules and regulations tariff to allow for the transportation of heavy crude oil.

As a result of the NEB's decision, Enbridge will be permitted to operate all of Line 9 in an eastward direction in order ➤

Government update *continued*

to transport crude oil from western Canada and the U.S. Bakken region to refineries in Ontario and Quebec.

Previously in a July 2012 decision, the board approved the reversal of the western portion of Line 9, a 194-kilometre segment linking Sarnia to North Westover.

During the board's hearing process, it heard concerns from participants regarding pipeline integrity, spills and emergency response, and Enbridge's consultation efforts.

The NEB's approval is subject to conditions set out in the orders and described in the accompanying reasons for decision. For example, the board's conditions require Enbridge to undertake activities regarding pipeline integrity, emergency response and continued consultation. The board's reasons for decision and conditions also make reference to Enbridge's ongoing emergency response planning and consultation with municipalities, first responders and aboriginal groups.

NEB APPROVES JORDON COVE ENERGY PROJECT NATURAL GAS EXPORT LICENCE

The National Energy Board (NEB) approved an application for a 25-year natural gas export licence to Jordan Cove Energy Project, L.P. to export natural gas. The licence is for a maximum term amount of 442 68 109m^3. The proposed export points include existing natural gas pipelines that cross the Canada-U.S. border near Kingsgate, B.C., and Huntingdon, B.C.

Issuance of the licence to export natural gas is subject to the approval of the governor-in-council.

Recent developments in gas production technology have resulted in a significant increase in the Canadian gas resource base and North American gas supply. One of the major impacts of this increase is lower demand for Canadian gas in traditional gas markets in the United States and eastern Canada. As a result, the Canadian gas industry is seeking to access overseas gas markets.

When evaluating natural gas export licence applications, the board considers if the quantity of gas proposed to be exported is surplus to Canadian requirements, taking into account trends in the discovery of gas in Canada. Each application is assessed on its own merits. The NEB determined that the quantity of gas proposed to be exported is surplus to Canadian requirements.

The board is satisfied that the gas resource base in Canada, as well as North America, is large and can accommodate reasonably foreseeable Canadian demand, this natural gas export application and a potential increase in demand.

The Canadian natural gas market will continue to respond appropriately to changes in supply and demand.

The NEB continuously monitors the Canadian and North American natural gas markets. The board has technical expertise in gas market supply and demand fundamentals and geological resource assessment. Natural gas market assessments, including long-term and short-term reports, are available on the NEB's website (for a full list, please see Energy Reports—Natural Gas).

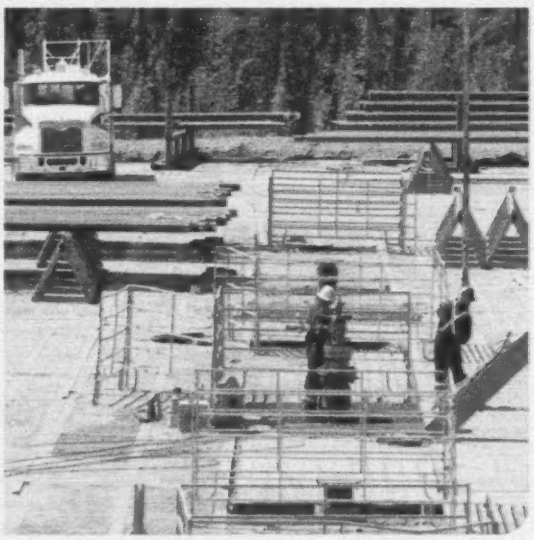
ALBERTA INCREASES ENERGY TIES WITH CHINA

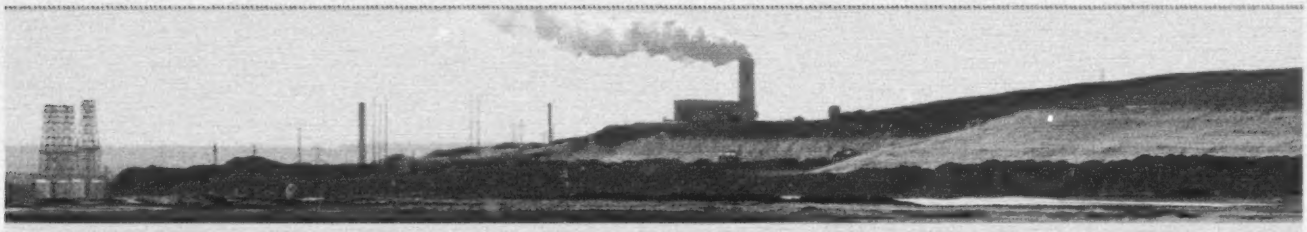
The Alberta government is strengthening ties to the growing Chinese market and supporting Alberta companies as they expand internationally in the areas of environmental protection and responsible resource development.

A trade mission led by Cal Dallas, minister of international and intergovernmental relations, will support eight Alberta exhibitors in Beijing at the China International Petroleum & Petrochemical Technology and Equipment Exhibition (CIPPE)—the world's largest petroleum exhibition—and 10 delegates showcasing technologies, products and services at Alberta-China Environmental Technology Workshops in Chengdu, China, and Harbin, China, on March 11-21.

Alberta companies exhibiting at CIPPE and delegates taking part in the workshops will all have opportunities to develop contacts; market technologies, products and services; and explore potential partnerships in China.

In 2013, industry that accessed Alberta services in Asia generated at least $460 million in trade and investment. Alberta missions to China last fall resulted in the signing of the first ever provincial energy agreement with China. ■





What's new in the oil and gas industry

BIG DEAL

Signalling a change from its previously bearish outlook for natural gas prices, Canadian Natural Resources Limited agreed February 19 to pay $3.13 billion for most of Devon Energy Corporation's western Canadian assets, the bulk of which are in Alberta.

Oklahoma City-based Devon said proved reserves associated with the divestiture totalled about 170 million barrels of oil equivalent exiting 2013.

The blockbuster deal will give Canadian Natural assets producing 86,633 barrels of oil equivalent per day in western Canada, with six owned and operated gas plants and four oil batteries. Excluded from the deal were Devon's thermal bitumen, conventional heavy oil and Horn River shale gas assets. The target closing date is April 1, with an effective date of Jan. 1, 2014.

"This is a gas-weighted acquisition—about 70 per cent is gas," Canadian Natural president Steve Laut acknowledged.

"And the metrics on the gas we think are very reasonable and fair," he said, noting North American gas storage is down significantly this year and the forward strip pricing is positive.

"We think it'll take quite a bit of time here to get the storage filled up. So 2014 and potentially into 2015 looks like pretty strong gas pricing, and that helps the metrics of this deal," Laut said.

"But that's not the driver of the deal," he emphasized. "It's the assets themselves—and our ability to integrate those assets, achieve operating costs and G&A [general and administrative] synergies, and just develop some of the light oil properties and liquids-rich natural gas—that drive the acquisition."

DRILLING ACTIVITY UPDATE

Operators drilled fewer wells in the first month of 2014, with Calgary-based *Daily Oil Bulletin* records indicating 1,188 rig releases in January compared to 1,255 a year ago (off 5.34 per cent).

In total, 2.46 million metres were drilled in January compared with 2.51 million metres a year ago. The peak year was 2006, when 3.07 million metres of hole were finished during the month.

In western and northern Canada, a record 2.2 million metres of development hole were drilled during the month, up from 2.18 million metres a year ago.

Of those wells with a final status, an overwhelming majority—85.58 per cent—were oil wells. Gas wells comprised only 6.98 per cent of wells with a final status, a record low.

In Alberta, 698 wells were rig released in January 2014 compared to 801 a year ago (a decrease of 12.86 per cent).

Drillers finished 1.54 million metres of hole, down from 1.64 million metres in January 2013. Operators in the province rig released a total 463 wells that had either oil (300) or bitumen (163) as an objective, compared to only 130 wells that were drilled with gas as an objective.

ALBERTA CLIPPER PIPELINE DELAYED

Enbridge Inc.'s proposed Alberta Clipper expansion in the United States will be delayed beyond its planned mid-year 2014 start-up because of regulatory delays in the United States, company president and chief executive officer Al Monaco said February 14.

However, the company is undertaking some temporary system optimization efforts that should pretty much mitigate any impact on throughput related to the 120,000-barrel-per-day first phase of the expansion, which is to go into operation by July of this year with additional pumping capacity, said Monaco.

"In the environment we are in, permitting and the regulatory process generally take more time," he said. The company anticipates it will have the permit before the second phase of 230,000 barrels per day is to go into operation in mid-2015, increasing total capacity to 800,000 barrels per day, he said.

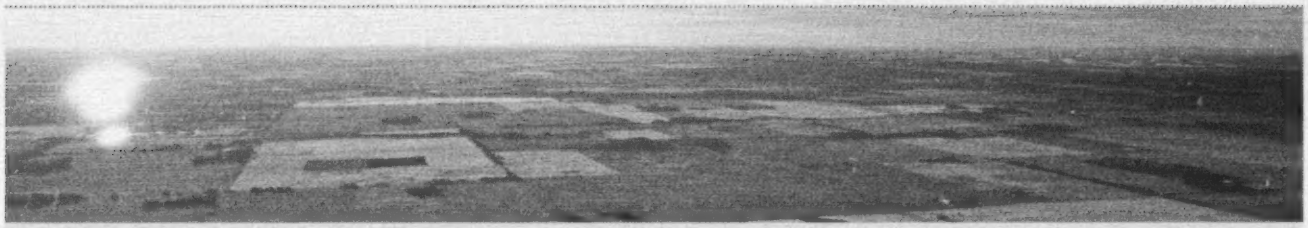
Alberta Clipper requires an amendment in the United States to the environmental impact statement when the line was approved in 2008, he said. "It is our understanding that this amendment is a relatively routine matter, but it still takes longer in this environment."

The pipeline is already in the ground, is in an existing right-of-way, will require minimal construction and the capacity is being added with compression, Monaco pointed out.

LAND SALES DOWN

Alberta's February land sale added $8.39 million to government coffers on Feb. 6, 2014, and after three sales so far in 2014, revenue is down by more than 60 per cent from 2013.

The government sold 23,168 hectares at an average of $362.22. Year-to-date, ➤



industry has paid $48.81 million for 189,372 hectares at an average of $257.73. To the same point last year, the provincial government had attracted $135.21 million on 456,268 hectares at an average of $296.34.

Highlights of the most recent sale included a bid of $1.76 million by Scott Land & Lease Ltd. for a single-section, 256-hectare licence. The broker paid an average of $6,882.53 for section 34 at 038-06W5 for petroleum and natural gas below the base of the Rock Creek Member.

Steve Hager, senior exploration analyst with Canadian Discovery Ltd., said the parcel is on the southwestern edge of the Willesden Green field, one mile northeast of Talisman Energy Inc.'s April 2013 horizontal Duvernay deeper pool test at 03-28-038-06W5, which flowed 25 million cubic feet per day of gas with 5,648 barrels of condensate during October and November 2013.

As a follow-up to that discovery, Talisman has licensed a 6,000-metre Duvernay deeper pool test at 11-25-038-06W5, he added.

DRILLING FORECAST UP SLIGHTLY FROM LAST YEAR

There should be a total of 10,930 wells rig released across Canada in 2014, according to the Petroleum Services Association of Canada (PSAC) forecast updated on Jan. 30, 2013.

In its first update to its 2014 *Canadian Drilling Activity Forecast*, PSAC said there will be 130 more wells drilled in the year than suggested in the original forecast released last autumn.

Mark Salkeld, president and chief executive officer of PSAC, said the 1.2 per cent increase is due to stronger-than-expected activity levels at the end of 2013, specifically in central Alberta and various regions of Saskatchewan. He added that, thanks to technology, the oil and gas industry is able to maintain production with fewer wells.

"It's just the way the industry has changed with respect to multi-well pads, and the activity going on at location is just shaping up just to keep it relatively consistent over the last two or three years," Salkeld said, adding that between now and PSAC's next forecast update in April, there could be changes to predictions depending on such factors as positive messages regarding market access.

"Say we find out that Keystone XL is going to get approved [as well as] Northern Gateway—if we can get positive signals on access to market, then that is going to boost investor confidence."

UPSTREAM DUVERNAY-INFRASTRUCTURE OPPORTUNITIES ABOUND

The emerging liquids-rich Duvernay shale play in Alberta will create opportunities for a wide range of new infrastructure—including condensate stabilization—once producers figure out what is needed.

"You need facilities to take the gas out of the condensate and stabilize that condensate," Mick Dilger, president and chief executive officer of Pembina Pipeline Corporation, told a recent CIBC World Markets conference in Whistler, B.C. In addition to a condensate stabilization unit, whose cost would depend upon the type of commodity mix in the gas stream, a gas plant would be required to handle the liquids-rich natural gas coming off the condensate, he said.

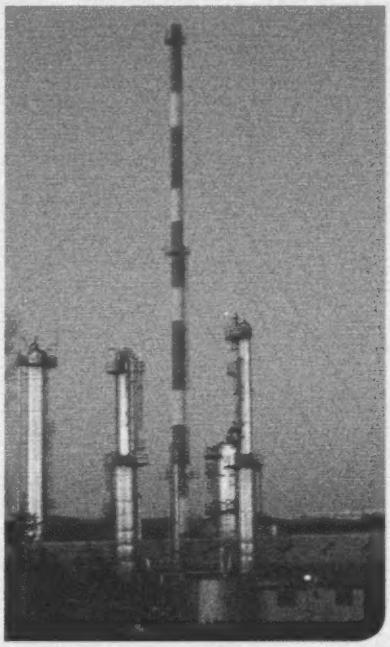
However, many of the existing gas plants are not suitable for the type of liquids-rich product that is being produced, said Dilger.

David Smith, president and chief operating officer of Keyera Corp., suggested there is a "little bit of a question" about the composition and volumes of condensate, as well as condensate handling and stabilization requirements. "Producers still need more time to evaluate the productivity and sustainability of those wells and to figure out what they really need from an infrastructure point of view."

According to Smith, the infrastructure required in the Duvernay also depends on the geographic area.

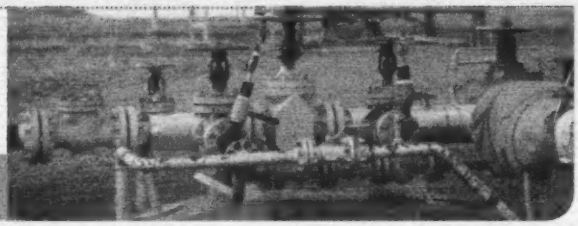
"In the Simonette area, there's no question there is a need for more infrastructure, and we think we are part of that solution with our Simonette infrastructure," he said.

The company is in the process of building more condensate handling capacity as well as more raw gas gathering and processing capacity, the conference heard. ■



TECHNOLOGY

UPDATE



CARBON CAPTURE STORAGE PROJECT PROGRESSING

Shell Canada Limited's Quest Carbon Capture and Storage Project in Alberta is moving ahead on schedule and on budget.

Quest is about 50 per cent complete and about half of the $1.4-billion budget has been spent, Tim Wiwchar, business operations manager for the project, said at the recent Canadian Oil Sands Summit, hosted by Insight Information.

The project is designed to capture about one million tonnes of CO_2 per year for 25 years from the Scotford oil sands upgrader's hydrogen manufacturing plants, representing a 35 per cent reduction in CO_2 emissions from the upgrader.

That CO_2 will be injected 2.3 kilometres deep into the Basal Cambrian Sands, a zone chosen for its ability to store the gas, said Wiwchar, who is responsible for oversight of the project's construction and start-up.

"This is the first time that we're actually going to be storing into a Basal Cambrian Sands complex, and so we had to work with the Alberta government to actually lease pore space, and that was one of the requirements, or if you will, the hurdle that we had to get over to get this project going," he said.

With that came a rigorous measurement, monitoring and verification program. The program is already underway during the pre-injection stage—a requirement for provincial government funding.

To ensure the CO_2 stays in place, Shell will continue the measurement, monitoring and verification program for 10 years after injection ceases, after which the pore space and liability return to the Alberta government, said Wiwchar.

Shell has drilled nine groundwater wells and has obtained access to more than 200 landowners' water wells to gather baseline information.

NEW TECHNOLOGY LOOKS PROMISING

The Upper Mannville Group formation in Alberta is showing promise for thermal heavy oil development, as demonstrated by Pikes Peak South and Paradise Hill, Husky Energy Inc.'s latest projects in that formation, said a reserves evaluator.

The performance of the two projects has been spectacular, according to Michael Verney, an associate at McDaniel & Associates Consultants Ltd. that annually evaluates Husky.

"This is only six well pairs," he said, indicating a production plot from the Paradise Hill thermal heavy oil project.

"Within six months, it exceeded its design capacity and is producing 6,000 barrels a day...with a steam-oil ratio of two, and it's pretty flat," Verney told the recent Insight Information Canadian Oil Sands Summit.

The low steam-oil ratio brings it in line with Canada's most efficient steam assisted gravity drainage projects.

Verney's main focus at McDaniel is to prepare economic evaluations of bitumen properties for securities reporting, debt and equity financing, and acquisitions and divestitures.

During a review of thermally exploitable zones at the summit, he noted that Husky has plans for four similar projects. "They have a lot of potential to target this type of zone going forward."

FRACKING TECHNOLOGY CONTINUES TO PROGRESS

Calfrac Well Services Ltd. says it has successfully completed the first high-rate slickwater annular coil frac operation in Alberta's prolific Cardium play.

Utilizing a sleeve-shift completion, 40 stages were successfully placed, with rates reaching 7.8 cubic metres per minute and sand concentrations upwards of 700 kilograms per cubic metre.

The unconventional fracturing technique was made possible by implementing new methods—unique to Calfrac—to allow for increased annular velocity rates, the company stated.

"Furthermore, this methodology serves to act as an alternative to typical 'cluster' fracs, as spacing between zones is readily reduced to allow for greater ability to enhance connectivity within the reservoir," Calfrac stated.

Initial post-frac results have been extremely positive and plans are in place to complete the next wellbore with up to 65 stages.

Calfrac says it will explore opportunities to introduce this technology in other areas of the Cardium, Montney and other deeper resource plays as an alternative to the completion techniques that are currently being utilized. ■

LABOUR UPDATE

LABOUR MARKET INFORMATION

Alberta finished off 2013 with strong employment growth and is well-poised to build on these gains in 2014 due to continuing strong investment in the energy sector. Employment increased 3.2 per cent from January 2013 to January 2014. This led the country in growth and translated into 69,600 more people working in the province. The rise in employment was distributed between full- and part-time jobs, with over 97 per cent of jobs attributed to full-time work.

However, the labour force expanded by an even faster rate over the past year, with an increase of 75,900 people. As a result, the unemployment rate edged up slightly to 4.6 per cent, the lowest rate since October, and the second lowest in the country after Saskatchewan.

Due largely to the highest third-quarter net migration on record in 2013, Alberta led all provinces in population growth for the eleventh consecutive quarter. With the addition of 35,645 new residents between July and September of 2013, the province expanded its population by 0.89 per cent to 4,060,719 people. This was Alberta's highest third-quarter population growth rate since 2006, and it more than doubled Canada's growth of 0.39 per cent.

CHANGES TO THE TEMPORARY FOREIGN WORKER PROGRAM

It's important to know that the Government of Canada continues to reform the Temporary Foreign Worker Program to ensure Canadians are always first in line for available jobs, while temporary foreign workers are protected.

Effective Dec. 31, 2013, the federal government introduced changes that will:

- Provide the government with the authority to conduct inspections to make sure employers are meeting the conditions of the program;
- Allow the government to ban non-compliant employers from the program for two years and immediately add their names to a public ban list;
- Strengthen criteria for assessing Labour Market Opinion (LMO) and work permit applications; and
- Provide the government with the authority to revoke or suspend LMOs or refuse to process LMO applications, and to revoke and refuse to process work permits if necessary.

For more information on the new regulations, visit the federal government website.

ALBERTA ECONOMIC DASHBOARD

Tap into the latest Alberta economic information with the Alberta Economic Dashboard.

This new online business information source presents timely and vital economic statistics in user-friendly formats to help your organization better understand Alberta's business environment. From job vacancies and housing starts, to new motor vehicle sales and net migration, this forward-thinking project is the first of its kind in Canada.

The dashboard provides 26 economic metrics specific to the Alberta economy and will be updated on a near-daily basis.

2013 ALBERTA WAGE AND SALARY SURVEY

The recently released 2013 Alberta wage and salary survey provides information on wages and salaries for full-time and part-time employees in Alberta by occupation, geographic area and industry group. This information can help you make informed compensation decisions and assist in developing competitive hiring policies.

U.S. RECRUITING FACT SHEET

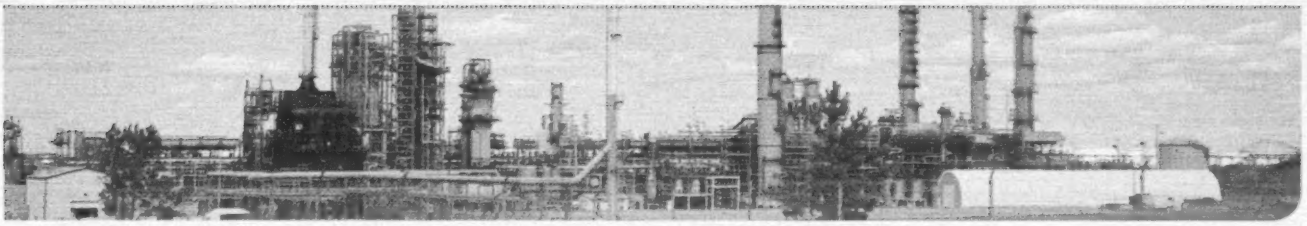
Are you recruiting internationally but have no idea where to start? The U.S. recruiting fact sheet provides information on the labour supply, migration trends, credential recognition and recruitment tips to help you make informed recruitment decisions.

NEW LABOUR MARKET INFORMATION

The Alberta government recently released updated versions of both the Short Term Employment Forecast and the Occupational Demand and Supply Outlook. These resources can help you make decisions about future staffing programs and resources on a per occupation basis.

CONTACT US

Contact us with questions or concerns or for more information at ABWorkforceinfo@gov.ab.ca. ■



Oil and gas statistics

DRILLING RIG COUNT BY PROVINCE/TERRITORY

Western Canada, Dec. 17, 2013

	ACTIVE	DOWN	TOTAL	ACTIVE
Western Canada				(Per cent of total)
Alberta	317	247	564	56%
Saskatchewan	70	75	145	49%
British Columbia	62	16	78	79%
Manitoba	12	14	26	46%
WC Total	461	352	813	57%

Source: [illegible]

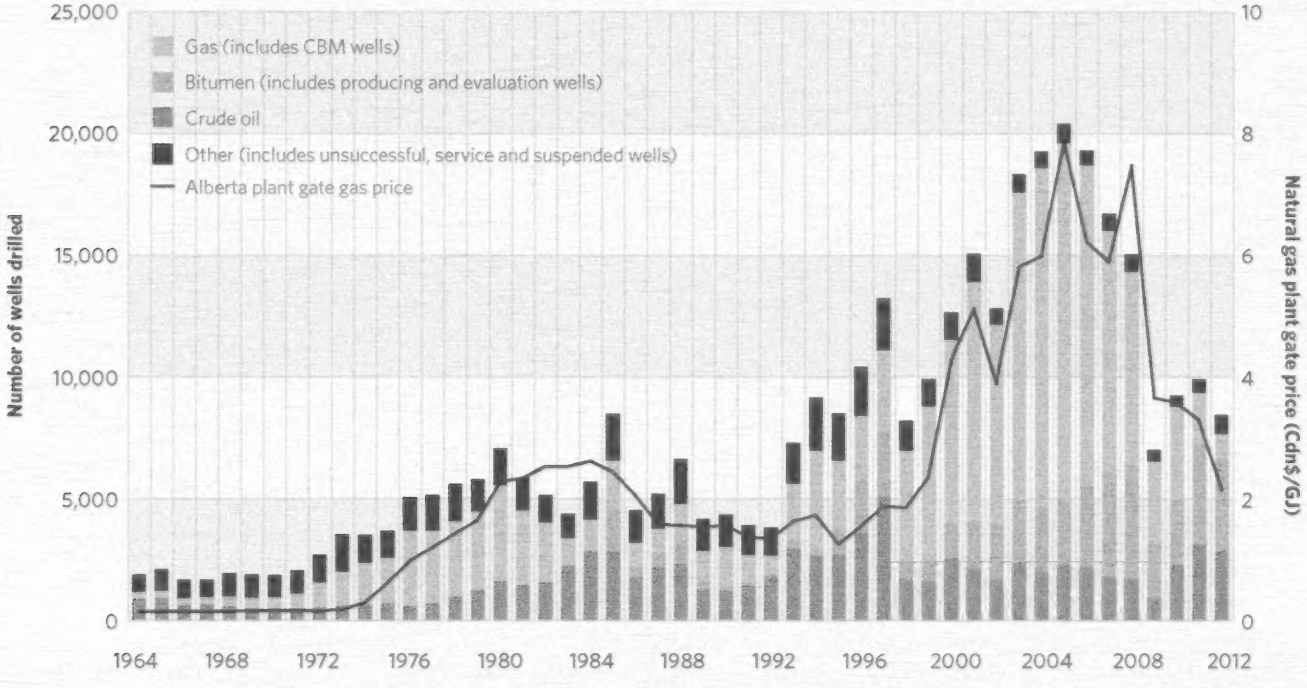
OIL & GAS WELL COMPLETIONS BY PROVINCE/TERRITORY

Western Canada, January 2014

	OIL WELLS		GAS WELLS	
Western Canada	**January 2013**	**January 2014**	**January 2013**	**January 2014**
Alberta	315	279	58	106
Saskatchewan	174	180	0	0
British Columbia	1	0	28	51
Manitoba	54	27	0	0
Total	**544**	**486**	**86**	**157**

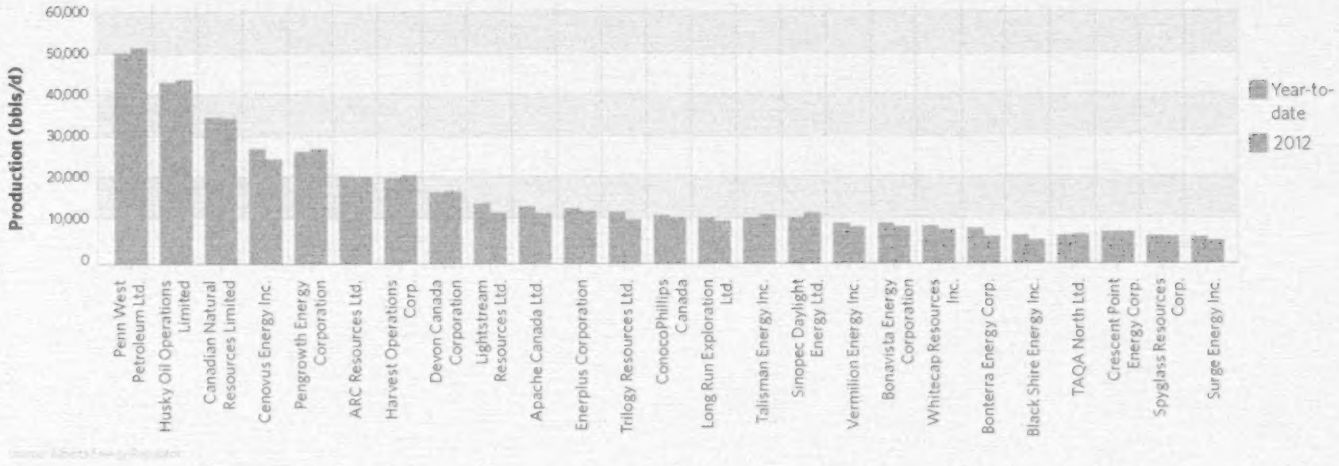
Source: [illegible]

DRILLING ACTIVITY IN ALBERTA, 1964 - 2012



Source: Alberta Energy Regulator

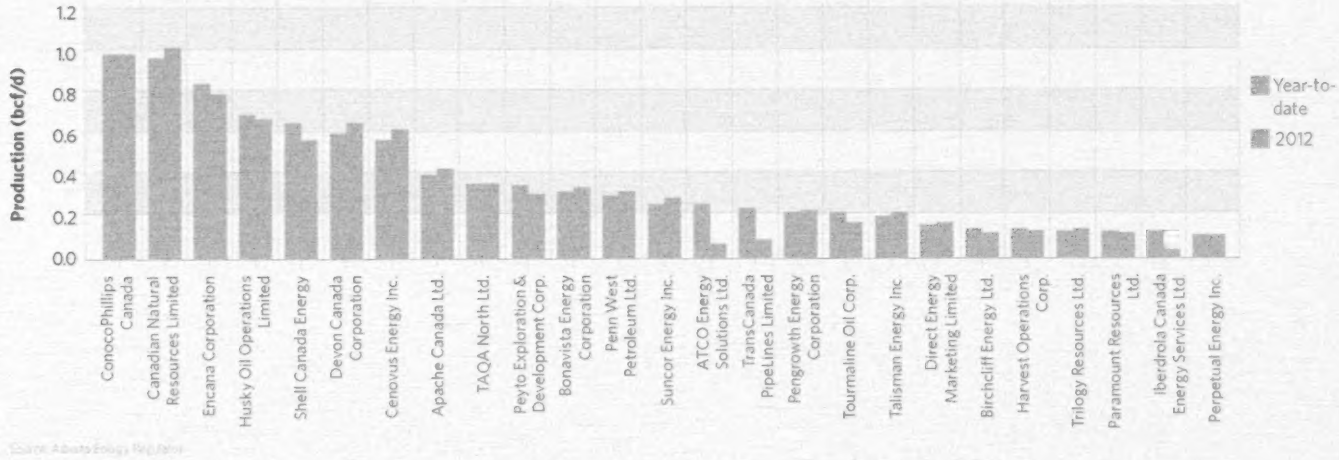
TOP 25 OIL PRODUCERS IN ALBERTA (AS OF JUNE 2013)



Source: Alberta Energy Regulator

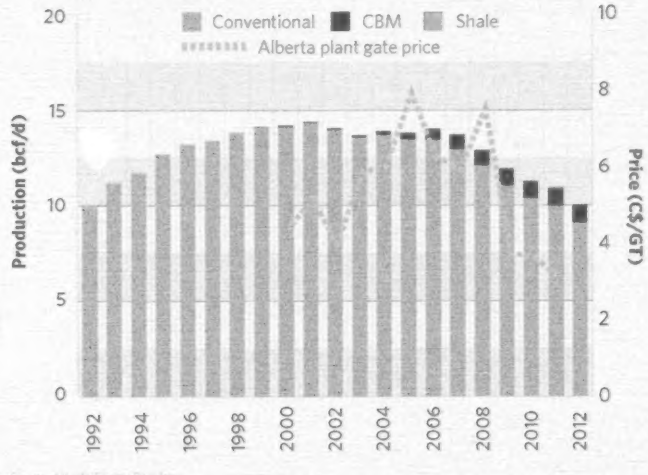
TOP 25 GAS PRODUCERS IN ALBERTA (AS OF JUNE 2013)

Only gas production reported from oil and gas batteries, gas gathering systems and gas plants is considered. Bitumen facilities, straddle plants and fractionation plants are excluded, as is gas from commercial gas storage schemes.



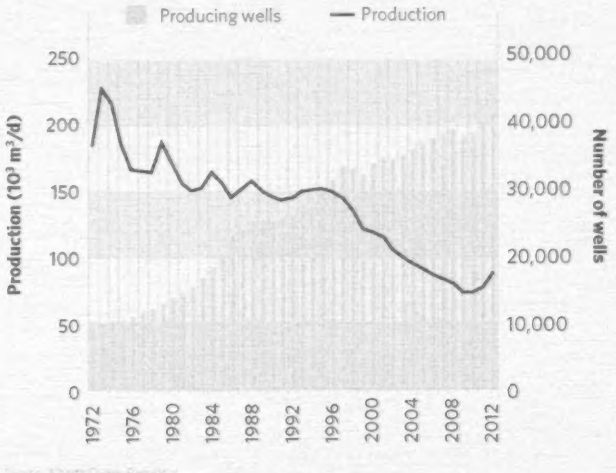
Source: Alberta Energy Regulator

ALBERTA MARKETABLE GAS PRODUCTION



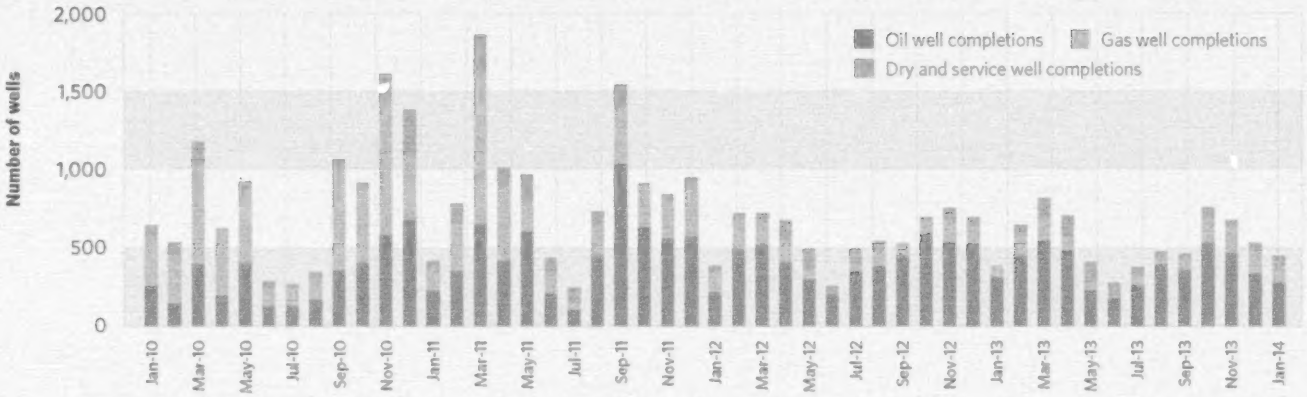
Source: Alberta Energy Regulator

ALBERTA CRUDE OIL PRODUCTION AND PRODUCING WELLS



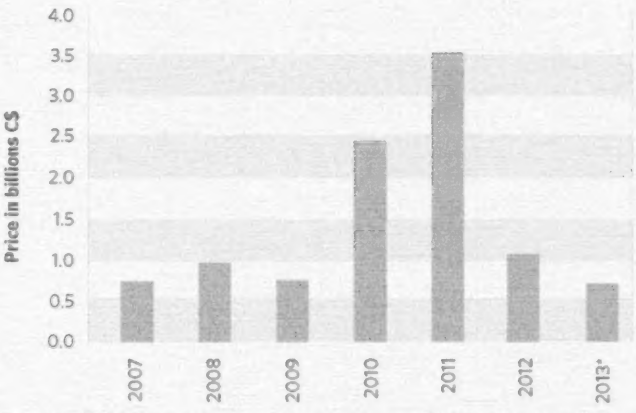
Source: Alberta Energy Regulator

ALBERTA WELL COMPLETIONS



ALBERTA CROWN LAND SALES

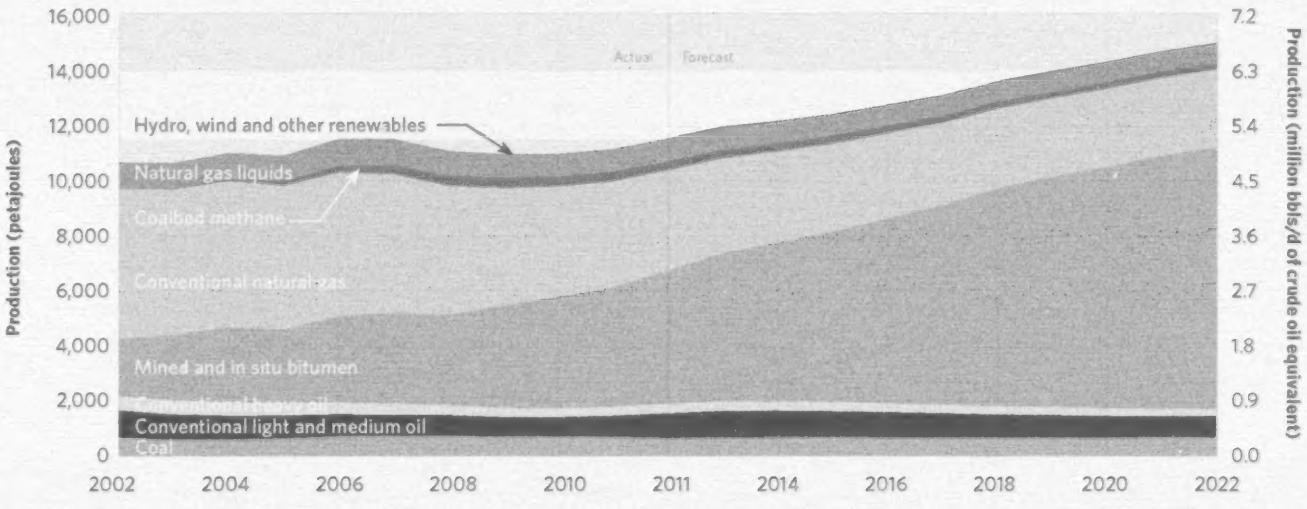
PSNG rights, excluding oil sands



WELL DEPTHS

	GAS			OIL		
	Total metres	Wells drilled	Avg. well depth (m)	Total metres	Wells drilled	Avg. well depth (m)
2009	6,638,293	4,194	1,583	5,448,442	3,574	1,524
2010	8,517,619.4	4,566	1,865	10,981,237	6,709	1,637
2011	7,253,946	2,800	2,591	15,387,285	8,891	1,731
2012	5,010,521	1,488	3,367	15,907,496	8,505	1,870
2013	5,198,392	1,528	3,402	15,327,052	8,181	1,873

TOTAL PRIMARY ENERGY PRODUCTION IN ALBERTA



The Duvernay: A rising star?

In December 2009, the Alberta government's final land sale of the year generated an eye-widening $384.3 million—a bright spot in what had been, to that point, a pedestrian year for provincial Crown auctions.

The Duvernay play in Alberta's Deep Basin was identified as a chief reason for the high bonus bids paid at this sale, and this was merely the opening act—it kicked off an over-two-year boom in Crown land spending. The apex came on June 1, 2011, when Alberta attracted a massive $843.03 million—an all-time high for a single sale—fuelled by the Duvernay.

With most of the prospective land spoken for, the question now is, Will the Duvernay fulfill its promise as the next star play of North America, or were those billions in land-acquisition dollars spent in vain?

According to a November 2013 study by BMO Capital Markets, drilling results over the last 1.5 years have confirmed the existence of multi-phase windows—dry gas, liquids-rich gas, volatile oil and black oil—and the ability of the reservoir to behave as a true, over-pressured shale reservoir and, from most windows, deliver hydrocarbons economically.

The Alberta government's royalty regime favours Duvernay gas wells over Duvernay oil wells, which suggests activity, at least in the near term, will be relegated to defining and drilling in the condensate- and natural gas liquids-rich windows, the study notes.

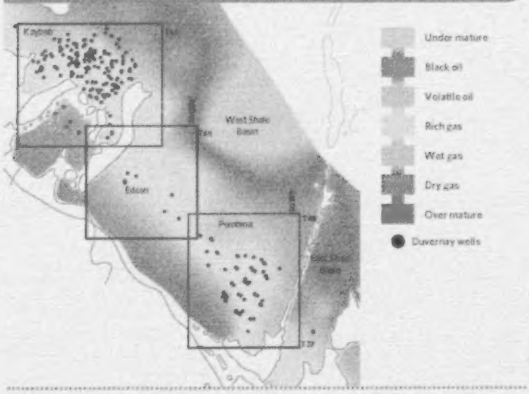
"It is with this continued investment that the Duvernay shale has emerged as a highly sought-after, world-class unconventional shale play, with a focus now on condensate—the new gold," BMO stated.

EARLY WELL RESULTS

Canadian Discovery Ltd. has identified 59 wells that report production from the Duvernay in Alberta, with 50 of these wells still on stream at Aug. 31, 2013.

The well with the highest oil rate is a Royal Dutch Shell plc well in the Kaybob field at 15-09-063-20W5, which averaged about 200 barrels of oil per day during that month. The best condensate rate was from an Encana Corporation well at 06-09-063-23W5 in the Waskahigan field, which averaged 480 barrels per day. And the best gas rate came from a Chevron Canada Limited well at Kaybob South 02-16-062-20W5, which averaged about 2.5 million cubic feet per day in August.

DUVERNAY FAIRWAY TODAY



Sources: GeoEDGES, GeoSCOUT, BMO Capital Markets

It's still too early to declare the play a commercial success, Canadian Discovery admitted, as operators are currently experiencing a range of successes.

"However, indications are that after operators determine the areas with the greatest potential and which completion programs work effectively in those areas, the project costs will come down significantly enough to provide long-term strong economics," the firm said.

FUTURE DEVELOPMENT

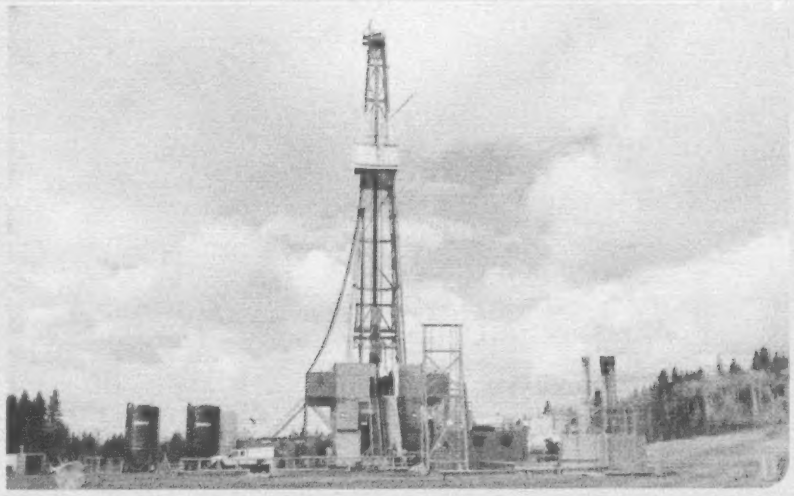
Brad Hayes, president of Petrel Robertson Consulting Ltd., said that while 2014 will be an important year for the Duvernay, he did not characterize it as a pivotal one. Companies will continue to optimize their drilling and completions practices, and some, such as Chevron and Encana, will ramp up development in areas they see as economic.

"The play will progress, but it's unlikely there will be any pivotal events that will suddenly change the course of overall development—we're a few years into it, and there are many more to go," he said. "Duvernay lands in the areas where commerciality is reasonably envisioned—around the liquids-rich part of the fairway—are quite tightly held.

"There are some land opportunities in areas of uncertain economic merit—in the dry gas or oil areas—but there is unlikely to be much more land activity in these areas until their productive and commercial merits are proven up."

BMO said the type well economics show that liquids-rich Duvernay gas wells are profitable and that the condensate has the greatest impact on value. This has led to operators pushing the play boundaries further into the oily phase window in their quest for higher condensate yields. ■

A snapshot of some major players in the Duvernay



With most of the prospective liquids-rich Duvernay land in Alberta's Deep Basin tied up, producers are slowly starting to drill the play in an attempt to prove up its potential.

The following is a summary of some of the companies with an acreage position in the Duvernay and their recent activity and plans for the near term.

TALISMAN ENERGY INC.

The company holds roughly 349,000 acres in the Duvernay, with a prospective resource of 1.4 billion barrels of oil equivalent (boe). In the North Duvernay, Talisman holds 155,000 net acres, with a prospective resource of 800 million boe, and 194,000 net acres in the South Duvernay, with a prospective resource of 600 million boe.

In the North Duvernay (Kaybob) position, there's extensive Talisman legacy infrastructure and roughly 123 horizontal industry wells drilled to date. For the South Duvernay (Willesden Green) position, the 2013 program confirmed reservoir quality and high liquids yields; two appraisal wells were brought on stream in the third quarter of 2013.

President and chief executive officer Hal Kvisle has said that Talisman will seek a joint venture for its Duvernay assets and has opted not to pursue a sale of its North Duvernay acreage.

CHEVRON CANADA LIMITED

Chevron reported encouraging results late last year from a drilling program in the Kaybob area of the Duvernay.

The producer successfully concluded its initial 12-well exploration drilling program in the liquids-rich portion of the play. Five wells had been completed and were tied into production facilities, and an additional four wells were waiting on completion and tie-in.

The company says its acreage is well positioned in the condensate-rich and volatile-oil portion of the play. Liquids yield for the completed wells ranged from 30 to 70 per cent, with initial production rates up to 7.5 million cubic feet of natural gas per day and 1,300 barrels of condensate per day.

With the acquisition of Alta Energy Luxembourg S.a.r.l. and affiliates' acreage, announced in 2013, Chevron now has approximately 325,000 net acres in the Kaybob area of the Duvernay.

"The Duvernay is a very attractive development area, and Chevron continues to be very encouraged by reservoir and performance data from results to date," said Leif Sollid, a Chevron spokesman. "The company is planning an appraisal program, which will be executed prior to full development. Goals of the appraisal program include optimizing well design, well spacing requirements and completions design."

ENCANA CORPORATION

Encana will move into full resource play hub development mode with pad drilling in the northern Kaybob area of the Duvernay in 2014, and complete its evaluation of the southern Willesden Green area. The company will also work to finalize a midstream infrastructure solution to support future development.

"We'll move to pad-based drilling in the northern portion of the Kaybob area and expect to reach a decision on commerciality for the Willesden Green and the southern portion of the Duvernay during the year," said president and chief executive officer Doug Suttles.

Encana plans to invest between $250 million and $300 million of its capital in this play in 2014, running a six to eight drilling rig program with plans to drill 15-20 net wells in 2014. Total investment in the Duvernay, including the carry capital contributed as part of Encana's joint-venture agreement with PetroChina Company Limited, will be in the range of $1 billion to $1.2 billion for the year.

Encana holds 253,000 net acres in the Duvernay.

ATHABASCA OIL CORPORATION

Athabasca Oil has 350,000 prospective acres in the Kaybob Duvernay play, and 200,000 acres are within the 20-metre contour of Duvernay thickness, with over 85 per cent of those lands in the liquids-rich gas areas.

The company had drilled two wells in the Duvernay by late November 2013 and had plans to have two more drilled before year-end 2013. For 2014, the company has a $76-million program planned in the Duvernay, which includes the drilling of two wells and the completion and tie-in of four wells.

The company continues to seek a joint-venture partner. ■

For more on the Duvernay, see the *Daily Oil Bulletin*'s special digital magazine of the play.

CONTACTS

Industry Associations

• Alberta Land Surveyors' Association	www.alsa.ab.ca
• Canadian Association of Geophysical Contractors	www.cagc.ca
• Canadian Association of Oilwell Drilling Contractors	www.caodc.ca
• Canadian Association of Petroleum Producers	www.capp.ca
• Canadian Energy Pipeline Association	www.cepa.com
• Canadian Gas Association	www.cga.ca
• Canadian Natural Gas	www.canadiannaturalgas.ca
• Canadian Natural Gas Vehicle Alliance	www.cngva.org
• Canadian Society of Exploration Geophysicists	www.cseg.ca
• Canadian Society of Petroleum Engineers	www.speca.ca
• Canadian Society for Unconventional Resources	www.csur.com
• Gas Processing Association Canada	www.gpacanada.com
• Petroleum Services Association of Canada	www.psac.ca
• Petroleum Technology Alliance Canada	www.ptac.org
• Explorers and Producers Association of Canada	www.explorersandproducers.ca

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• Alberta Innovates	www.albertainnovates.ca
• Alberta Geological Survey	www.ags.gov.ab.ca
• Alberta Surface Rights Board	www.surfacerights.gov.ab.ca

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